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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/996,711 | 11/30/2001 | Roland Boss | 10007748-1 | 3684 |

7590 09/17/2004
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER

NGO, HOANG X

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2852

DATE MAILED: 09/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/996,711

Applicant(s)

BOSS, ROLAND

Examiner

Hoang Ngo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 15-25 and 34-39 is/are allowed.
- 6) ☒ Claim(s) 1-13, 26-33 and 40-42 is/are rejected.
- 7) ☒ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/10/2004 has been entered.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 4, 5, 6, 9, 26-30, 41, and 42 are rejected under 35 U.S.C. 102(e) as being anticipated by Hirst et al. (U.S. Pat. No. 6,512,913).

Hirst et al. disclose a fuser assembly 302 (Fig. 4) comprising a fusing roller 336 having a metal heat absorptive outer layer 416 on an inner core 408 of thermally isolating material (i.e. silicon rubber, Col. 5, line 36) and a radiant heating element 822 positioned adjacent and external to the outer layer of the roller (Fig. 8).

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Hirst et al further disclose a temperature transducer 420 for detecting a surface temperature of the roller, a heating element controller, the outer layer has a thickness of between zero and three millimeters (i.e. 0.1 to 0.2 mm, Col. 5, line 65), the inner core is fabricated from a particulate material of rubber (i.e. silicon rubber), the outer layer is fabricated from aluminum (Col. 5, line 63), the roller comprising a skeletal inner structure having void containing air (i.e. hollow tube 404, Col. 5, line 28), the metal heat absorptive outer layer is a sheet of metal or a metallic coating (Col. 5, lines 62-67).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7, 8, 12, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirst et al in view of Onishi et al (Jap. Pub No. 08-314323).

As discussed above, Hirst et al disclose such fusing assembly except for a heat reflector to direct a portion of heat radiated by a heating array toward the fusing roller and the printing media prior to engaging with the fusing roller. However, the use of such heat reflector is common and well known as shown by the Onishi's reference as heat reflector 71a for directing heat from a heating array 71 toward the fusing roller 50 and the printing media 40. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide such heat reflector, as

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taught by Onishi et al, to the fusing assembly of Hirst et al in order to provide an even fixing heating using radiant heat.

6. Claims 31 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirst et al in view of Takeuchi et al (U.S. Pat. No.6,505,027).

As discussed above, Hirst et al disclose such roller structure except for a rib extending radially from a central shaft. However, the use of such structure is common and well known as shown by the Takeuchi's reference in element 17c (Figs. 7 & 8). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide such structure, as taught by Takeuchi et al, to the fusing roller of Hirst et al in order to provide the fusing roller with sufficient rigid strength.

7. Claims 13 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirst et al in view of Onishi et al as set forth above and further in view of Hartley et al (U.S. Pat. No. 6,442,366).

As discussed above, Hirst et al in view of Onishi et al disclose such fusing assembly except for the heating array being a plurality of longitudinally heating arrays circumferentially spaced along a periphery of the fusing roller. However, the use of such heating arrays is common and well known as shown in the Hartley's reference by element 32. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide such heating arrays, as taught by Hartley et al, to the fusing assembly of Hirst et al in view of Onishi et al in order to provide an even fixing heating on the fusing roller.

Allowable Subject Matter

8. Claims 15-25 and 34-39 are allowed.
9. Claims 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
10. The following is a statement of reasons for the indication of allowable subject matter: None of the prior art of record teaches a controller for detecting a thermal property of the fusing roller and in response controlling the radiant heating arrays wherein the thermal property includes a differential temperature measured on either side of the nip region of the fusing roller or between the fusing roller and the pressure roller.

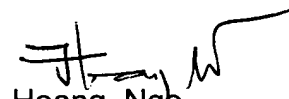
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoang Ngo whose telephone number is (571) 272-2138. The examiner can normally be reached on 6:00am - 2:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on (571) 272-2136. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Hoang Ngo
Primary Examiner
Art Unit 2852

Hxn
Sept 15, 2004